

File 411:DIALINDEX(R)

DIALINDEX(R)

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*** DIALINDEX search results display in an abbreviated ***

*** format unless you enter the SET DETAIL ON command. ***

You have 62 files in your file list.

(To see banners, use SHOW FILES command)

?s (Si-Ge or Ge-Si or silicon(1n)germanium) (12n) (interlayer or interface)

Your SELECT statement is:

s (Si-Ge or Ge-Si or silicon(1n)germanium) (12n) (interlayer or interface)

Items	File
-----	-----
35	2: INSPEC_1969-2004/Feb W1
2	6: NTIS_1964-2004/Feb W2
3	8: Ei Compendex(R)_1970-2004/Feb W1
40	34: SciSearch(R) Cited Ref Sci_1990-2004/Feb W2
2	35: Dissertation Abs Online_1861-2004/Jan

Status: Break Sent.

?s (Si-Ge or Ge-Si or silicon(1n)germanium) (12n) (interlayer or interface) and (silicide or salicide) and (pd<20000306 or py<2001)

Your SELECT statement is:

s (Si-Ge or Ge-Si or silicon(1n)germanium) (12n) (interlayer or interface)
and (silicide or salicide) and (pd<20000306 or py<2001)

Items	File
-----	-----
1	2: INSPEC_1969-2004/Feb W1
2	34: SciSearch(R) Cited Ref Sci_1990-2004/Feb W2
1	95: TEME-Technology & Management_1989-2004/Jan W4

Examined 50 files

Status: Break Sent.

?b 2

13feb04 12:36:04 User264704 Session D163.2
\$9.44 4.197 DialUnits File411
\$9.44 Estimated cost File411
\$1.25 TELNET
\$10.69 Estimated cost this search
\$10.71 Estimated total session cost 4.348 DialUnits

File 2:INSPEC 1969-2004/Feb W1

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***File 2: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.**

Set	Items	Description
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?s	(Si-Ge or Ge-Si or silicon(1n)germanium) (12n) (interlayer or interface) and (silicide or salicide) and (pd<20000306 or py<2001)	
	825	SI-GE
	810	GE-SI
	306542	SILICON (January 1969)
	42193	GERMANIUM (January 1969)
	3913	SILICON(1N)GERMANIUM
	10344	INTERLAYER
	254930	INTERFACE
	35	((SI-GE OR GE-SI) OR SILICON(1N)GERMANIUM) (12N) (INTERLAYER OR INTERFACE)

8129 SILICIDE
579 SALICIDE
20578 PD<20000306
6927446 PY<2001
S1 1 (SI-GE OR GE-SI OR SILICON(1N)GERMANIUM) (12N) (INTERLAYER
OR INTERFACE) AND (SILICIDE OR SALICIDE) AND (PD<20000306
OR PY<2001)

?t sl/full/1

1/9/1

DIALOG(R)File 2:INSPEC

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6464472 INSPEC Abstract Number: A2000-04-6475-001

Title: Germanium segregation in the Co/SiGe/Si(001) thin film system

Author(s): Goeller, P.T.; Boyanov, B.I.; Sayers, D.E.; Nemanich, R.J.;
Myers, A.F.; Steel, E.B.

Author Affiliation: Dept. of Phys., North Carolina State Univ., Raleigh,
NC, USA

Journal: Journal of Materials Research vol.14, no.11 p.4372-84

Publisher: Mater. Res. Soc,

Publication Date: Nov. 1999 Country of Publication: USA

CODEN: JMRREE ISSN: 0884-2914

SICI: 0884-2914(199911)14:11L:4372:GSST;1-6

Material Identity Number: I870-1999-011

U.S. Copyright Clearance Center Code: 0884-2914/99/\$2.50

Language: English Document Type: Journal Paper (JP)

Treatment: Bibliography (B); Experimental (X)

Abstract: Cobalt disilicide contacts to silicon-germanium alloys were formed by direct deposition of pure cobalt metal onto silicon-germanium films on Si(001) substrates. Segregation of germanium was observed during the reaction of the cobalt with the silicon-germanium alloy. The nature of the Ge segregation was studied by transmission electron microscopy, energy dispersive spectroscopy, and X-ray diffraction. In the case of cobalt films deposited onto strained silicon-germanium films, the Ge segregation was discovered to be in the form of Ge-enriched Si/sub 1-x/Ge/sub x/ regions found at the surface of the film surrounding CoSi and CoSi/sub 2/ grains. In the case of cobalt films deposited onto relaxed silicon-germanium films, the Ge segregation was dependent on formation of CoSi/sub 2/. In samples annealed below 800 degrees C, where CoSi was the dominant **silicide** phase, the Ge segregation was similar in form to the strained Si/sub 1-x/Ge/sub x/ case. In samples annealed above 800 degrees C, where CoSi/sub 2/ was the dominant **silicide** phase, the Ge segregation was also in the form of tetrahedron-shaped, Ge-enriched, **silicon - germanium** precipitates, which formed at the substrate/ **silicon - germanium** film **interface** and grew into the Si substrate. A possible mechanism for the formation of these precipitates is presented based on vacancy generation during the silicidation reaction coupled with an increased driving force for Ge diffusion due to silicon depletion in the alloy layer. (57 Refs)

Subfile: A

Descriptors: cobalt; diffusion; Ge-Si alloys; metallic thin films; segregation; semiconductor thin films; silicon; transmission electron microscopy; vacancies (crystal); X-ray chemical analysis; X-ray diffraction

Identifiers: direct deposition; pure Co metal; strained Si-Ge films; Si(001) substrates; reaction; Si-Ge alloy; Ge segregation; transmission electron microscopy; energy dispersive spectroscopy; X-ray diffraction; Co films; Ge-enriched Si/sub 1-x/Ge/sub x/ regions; CoSi/sub 2/ grains; CoSi grains; Co/SiGe/Si(001) thin film system; dominant **silicide** phase; tetrahedron-shaped Ge-enriched Si-Ge precipitates; substrate/Si-Ge film interface; mechanism; vacancy generation; silicidation reaction; driving force; Ge diffusion; alloy layer; Si depletion; CoSi/sub 2/ contacts; Co-SiGe; SiGe-Si; Si; SiGe; CoSi/sub 2/; CoSi

Class Codes: A6475 (Solubility, segregation, and mixing); A6865 (Low-dimensional structures: growth, structure and nonelectronic properties); A6170B (Interstitials and vacancies); A6630J (Diffusion, migration, and displacement of impurities in solids); A6822 (Surface diffusion, segregation and interfacial compound formation)

Chemical Indexing:

Co-SiGe int - SiGe int - Co int - Ge int - Si int - SiGe bin - Ge bin -
Si bin - Co el (Elements - 1,2,3)
SiGe-Si int - SiGe int - Ge int - Si int - SiGe bin - Ge bin - Si bin -
Si el (Elements - 2,1,2)
Si sur - Si el (Elements - 1)
SiGe sur - Ge sur - Si sur - SiGe bin - Ge bin - Si bin (Elements - 2)
CoSi2 bin - Si2 bin - Co bin - Si bin (Elements - 2)
CoSi bin - Co bin - Si bin (Elements - 2)
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?

Status: Signing Off...

logoff

13feb04 12:37:26 User264704 Session D163.3

\$4.33 0.559 DialUnits File2

\$2.70 1 Type(s) in Format 9

\$2.70 1 Types

\$7.03 Estimated cost File2

\$0.50 TELNET

\$7.53 Estimated cost this search

\$18.24 Estimated total session cost 4.907 DialUnits